

**MARCUS A. WILEY, P.E.
MINING ENGINEER**

SUMMARY OF QUALIFICATIONS:

A registered professional engineer with extensive experience in mine engineering and management. Prior to starting the consulting firm of Wiley Engineering, Inc. in 1981, worked for Consolidation Coal Company in progressively responsible engineering and management roles covering many phases of mine exploration, planning, permitting, supervision and construction for operations located in four major coal fields in the United States. Served as President of Ranchers Coal, Inc., an independent Oklahoma coal company. Special abilities in management of mining projects from inception to completion. As president of Mid-America Mining & Development, Inc. supervised in the development of an underground coal mine in Arkansas. As a mining consultant for over 25 years, has provided the mining industry with mine planning, economic evaluations, project management, feasibility studies, due diligence analysis, geologic mapping, reserve studies, litigation support, contract mining and reclamation, EPC (engineering, procurement and construction) contracts, and other professional mining related services. The company name: Wiley Engineering, Inc. was changed to Wiley Consulting, LLC in 2001. Currently instructing and pursuing a PhD at Colorado School of Mines.

EXPERIENCE HIGHLIGHTS

WILEY CONSULTING, LLC – Englewood, Colorado

Manager

December 2001 to present – restructured Wiley Engineering, Inc. from a corporation to a limited liability company to continue the consulting practice of Marcus A. Wiley, Professional Engineer.

COLORADO SCHOOL OF MINES – Golden, Colorado

Instructor

Teach two spring semester classes: Coal Mining Methods 2003, 2004, 2005 and 2006; Mine Valuation 2004 and 2005.

MADISON COAL, LLC – Ashland, Kentucky

General Manager 2005, part owner currently

Acquired an interest in a small West Virginia underground coal mine operation. Provided overall company management until hiring full time manager. Company is expanding through acquisition of operating mines and development of properties.

WILEY ENGINEERING, INC. - Englewood, Colorado

President/Owner

1988 to December 2001 – 1988 relocated to Englewood, CO.

Changed name in 2001

1983 to 1988 – offices in Tulsa, Oklahoma

October 1981 to 1983 – started firm in Farmington, New Mexico

Provides professional engineering services for various companies and individuals, including coal property evaluation, economic feasibility, land acquisition, permitting, coal mine design and development, reserve analysis, equipment selection, contract mining, litigation support, expert witness

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testimony and representation of clients before various governmental agencies and third parties. Engineering design, procurement and construction of mining related facilities including a section 29 coal tax credit facility.

MID-AMERICA MINING & DEVELOPMENT, INC.

President, majority owner

1990 to 2000 – Sold ownership in company December 2000

Vice-President, part owner

1987 to 1990 – Founder and part owner

Mid-America Mining & Development, Inc., was formed to provide coal mine exploration, engineering, mine planning, design, financing, permitting and management for a greenfields surface and underground mine located in southwest Arkansas. Operated surface mine on property and used contract miner for underground operations.

RANCHERS COAL COMPANY - Miami, Oklahoma

1983 to 1985

President, part owner

Managed an investor group acquisition of a small privately owned coal surface mining company and supervised a four fold increase of production within one year. Owned 25% of company. As president had overall responsibility for financing, marketing, lease acquisition, geology, engineering, permitting, reclamation, safety, operations, transportation and public relations. Developed a reputation for excellent reclamation and engineering expertise. Won a reclamation award from the Office of Surface Mining for superior reclamation of contour stripping surface mine. Sold interest in mine and moved back to full time consulting in 1985.

CONSOLIDATION COAL COMPANY - Pittsburgh, Pennsylvania

May 1971 to October 1981

A Dupont/Conoco subsidiary, the second largest coal producer in the United States with annual production in excess of 40 million tons at time of employment.

Project Manager/Mine Superintendent - Burnham Mine, New Mexico

1978 to 1981

Project management and overall supervision for exploration, permitting, engineering, construction, litigation, public relations and operations of new mine on the Navajo Indian Reservation.

Mine Superintendent - Farmington, New Mexico

1977 to 1978

Mine planning and development, equipment selection, permitting and employee selection.

Senior Mine Engineer - Denver, Colorado

1976 to 1977

Supervision of regional engineering staff including exploration and development engineering.

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CONSOLIDATION COAL COMPANY - continued

Project Engineer - Billings, Montana

1975 to 1976

Mine planning, mine economics, development and field exploration of properties in Montana and Wyoming.

Maintenance Superintendent - Sparta, Illinois

1974 to 1975

In charge of all maintenance, both electrical and mechanical, at 2 mm tons per year surface mine.

Mine Foreman, Maintenance Foreman and Maintenance Superintendent –

Duquoin, Illinois

1973 to 1974

As mine foreman, in charge of production on shift for surface mine, transferred to maintenance shift foreman, and later promoted to superintendent in charge of shop and field maintenance.

Mining Engineer - Cadiz, Ohio

1972 to 1973

Mine planning and geological mapping at the regional office for nine surface mines totaling over 5 mm tons per year of production.

Summer Mine Engineer - Price Utah

Summer, 1971

Underground mine mapping and geologic mapping from exploration data at an exploration office. Took leave of absence to finish final year of college.

CLIMAX MOLYBDENUM, INC. - Climax, Colorado

Summer 1970

Underground Laborer

Worked as an underground mine laborer on a development crew drilling and blasting haulage ways and stopes.

EDUCATION

PhD in progress in Mining Engineering with a minor in Mineral Economics

Colorado School of Mines, Golden, Colorado. Full time student, courses finished, research and thesis in progress, plan to graduate May 2007

Bachelor of Science in Mining Engineering - New Mexico Institute of Mining and Technology, Socorro, New Mexico, May 1972

Economic Evaluation and Investment Decision Methods – Colorado School of Mines, Golden, Colorado 1977 & 1990

Drilling and Blasting Technology Seminar - Reed Tool Company. Houston, Texas, 1976

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PROFESSIONAL

Professional Engineer - Colorado,

Past registration in New Mexico and Oklahoma, currently inactive

Engineering in Training - Illinois

Surface Mine Supervisor - State of Oklahoma Mining Board

Surface Mine Supervisor - State of Arkansas Department of Labor

Patents – Co-author of 2 patents:

US Patent No. 6,460,936 *Borehole Mining Tool*

Issued: October 8, 2002

US Patent No. 6,688,702 *Borehole Mining Method*

Issued: Feb. 10, 2004

Co-author of provisional patent:

US Patent No. 60/791,401 *Select Synthesis Gas Generation Apparatus and Method*

Issued: April 11, 2006

Current Member or Past Member;

Colorado Mining Association

Colorado Society of Professional Engineers

Professional Engineers in Private Practice

National Society of Professional Engineers

Oklahoma Society of Professional Engineers

Society of Mining Engineers of American Institute of Mining Engineers

Member, President, Director of Denver Coal Club

President of Student Chapter SME

New Mexico Mining Association

Chamber of Commerce, Farmington, New Mexico - Served on energy and transportation committee

PUBLICATIONS

Co-author with Grigori Abramov. "Borehole mining – environmentally friendly, underused"

Published in *Mining Engineering*, April 2001, page 33.

Co-author with Grigori Abramov. "Borehole mining: getting more versatile"

Published in *Mining Engineering*, January 2004, page 36

Chapter editor –*Mining Reference Handbook* published by SME 2002

Chapter 7 – Sampling and Analysis

Chapter 8 - Economics and Costing

Chapter 21 – Maintenance and Inventory

Note: This book is now in its second printing and has been the most successful book ever printed by SME and was honored in 2004 as an "Outstanding Academic Title" by the Association of College Research Libraries, a Division of the American Library Association. This book was selected out of 6,847 books reviewed and over 23,000 titles considered.

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Currently working with SME on the new third edition of *SME Mining Engineering Handbook* , planned for publication in 2010